Mahmudul Hasan Nihad

Software Engineer

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Skills

- Language: C ● C++ ● JavaScript ● JSX ● Python
- Front End Development: HTML ● CSS ● React ● Vue ● Angular
- Back End Development & Database: NodeJS ● Express ● MongoDB ● Mongoose

Education

BSC. IN COMPUTER SCIENCE AND ENGINEERING | University of Asia Pacific *March 2017 - February 2022*

- Awards: CHAMPION 2018 Intra Department Programming Contest University of Asia Pacific, Dhaka.
- Relevant Coursework: Data Structure, Algorithm, OOP, Db System, System Analysis and Design, Software Development, Artificial Intelligence, Machine Learning, Industrial Training.
- Thesis: A Deep Learning Based Approach to Image Captioning in Bangla
    - Abstract: Developed a deep learning Bangla image caption generating model with NLP and Computer Vision.
    - Key Contributions:
        - Dataset Utilization & Modification: Merged BanglaLekhaImageCaptions 9k+ images & translated Flickr 8k
        - Model Development: Employed ResNet50 feature extracting & LSTM caption generation.
        - Data Preprocessing: Feature extraction, punctuation removal, sequence tagging & vocabulary encoding.
        - Training and Evaluation: Achieved satisfactory accuracy using BLEU scores for evaluation.
    - Impact: Contributed to human-computer interaction, assistive software for the disabled, and surveillance systems.

Projects

Online Shop

- Description: Full stack e-commerce web-app with user & product management, order processing. The app allows users to register, login, view products, place orders. Admin functionalities include product management and order tracking.
- Technologies Used: Node.js, Express, MongoDB, EJS, HTML, CSS, JavaScript, bcrypt, express-session
- Key Contribution:
    - Designed responsive frontend using EJS templates and implemented the backend using Node.js and Express.
    - Implemented user authentication and session management with bcrypt and express-session, and developed middleware for session-based authentication.
    - Created RESTful APIs for product and order management and integrated MongoDB for data storage and retrieval.

Share Places

- Description: MERN stack web app that allows users to share & discover places. Frontend is built with React, while backend is built using Node, Express, MongoDB & Mongoose. The app features user authentication, map integration, photo uploads, enabling users to create, view, share location. REST APIs connected frontend-backend seamlessly.
- Technologies Used: Node, Express, MongoDB, React, CSS, JS, Google Maps API, Multer, bcrypt, JWT, express-session
- Key Contribution:
    - Designed frontend using React for a dynamic user experience and implemented backend using Node.js, Express & Mongoose.
    - Developed user authentication using bcrypt and JWT for secure access and integrated Google Maps API for location services.
    - Created RESTful APIs for managing places and user profiles, connecting the frontend and backend.
    - Implemented photo upload functionality using Multer.

Othello Board Game

- Description: Developed a console-based Othello game using graph algorithms and player interactions.
- Technologies Used: C++, Standard Library (STL)
- Key Contribution:
    - Implemented game logic and state management.
    - Designed move validation and execution algorithms.
    - Developed a user-friendly console interface for gameplay.

Tic-Tac-Toe

- Description: Developed a web-based Tic-Tac-Toe game with a responsive and interactive interface.
- Technologies Used: HTML, CSS, JavaScript
- Key Contribution:
    - Implemented game logic and state management.
    - Designed UI and game board.
    - Added player configuration options.

Competitive Programming

Solved over 500+ challenges on prominent platforms such as UVA, Codeforces, LightOJ, and VJudge. Participated in 10+ national-level onsite contests, showcasing dedication to competitive programming.

- 32nd, 2019 LU IUPC
  TEAM NAME: UAP_CODECHEMIST
- 134th, 2019 ACM-ICPC DHAKA REGIONAL
  TEAM NAME: UAP_CODECHEMIST